



NAVY DEPARTMENT

BUMED NEWS LETTER

a digest of timely information

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Tsutsugamushi Disease (Scrub Typhus): Large explosive outbreaks of scrub typhus have recently occurred on certain advance bases in the Southwest Pacific Area. In certain areas, this disease, because of its high incidence, severe clinical course, and resultant great loss of man-days, may be more important than malaria. The mortality rates in the recent outbreak have been approximately 1 per cent, although the usual mortality rate is approximately 7

per cent. In future Pacific operations scrub typhus must be considered a potential disease problem of first rank along with malaria and dysentery, and medical officers are urged to become thoroughly familiar with its manifestations.

Discussions of scrub typhus have been included in the Bumed News Letter, Volume 2, Number 13, of December 24, 1943, and Volume 3, Number 11, of May 26, 1944. It is suggested that these articles be reviewed. A very recent report, "Mite Borne (Scrub) Typhus in Papua and Mandated Territory of New Guinea, Report of 626 Cases", by Lt. Col. S. W. Williams, Lt. Col. A. J. M. Sinclair and Major A. W. Jackson of the Australian Army, contains some additional information of value, which has been condensed and added to in the following discussion.

Common findings are listed as follows:

1. The incubation period is considered to be from 10 to 21 days.
2. A black eschar with a reddish areola is found at the onset in 59 per cent of cases. It is usually found about the hips, trunk, chest, neck, axillae or arms.
3. A rash develops in 65 per cent of cases, appearing as reddish macules on the fifth to eighth day, and becoming maculopapular in about 24 hours. The rash begins on the chest and becomes generalized in about 48 hours.
4. Appreciable axillary and/or inguinal lymphadenopathy is present in 66 per cent of cases. Nodes are moderately tender, and greatest involvement is noticed in the area draining the eschar.
5. Fever is usually remittent in type, ranging from 99° to 103-106° F. daily, the duration of the febrile period being from 4 to 25 days, commonly 14 to 17 days, depending on the severity of the disease.
6. Abnormal pulmonary findings consisting of rales, rhonchi, and crepitation are present in 44 per cent of cases and usually develop during the second week. Lung findings commonly occur only in the more severe cases, as does cyanosis.
7. Mental or neurological disturbances appear in 37 per cent of cases. Mental abnormalities range from mild euphoric through active hallucinatory states to delirium and coma. Common neurological disturbances are deafness, headache and changes in the deep reflexes.
8. Abnormal cerebrospinal fluid is found in over 50 per cent of cases. Increased pressure, lymphocytosis, increased protein and decreased chlorides are common findings.

9. The cardiovascular system shows little disturbance in mild cases. The pulse rate is generally elevated during the second week to above 90 in average cases and to above 120 in those extremely ill. Abnormal cardiac rhythms such as extrasystoles, pulsus alternans and gallop rhythm are likewise noted in gravely ill patients. Blood pressure is little disturbed in mild cases, but in severe cases drops to 80 to 100 systolic and 35 to 60 diastolic during the second and third weeks.

10. Diagnosis is most readily confirmed by performing Weil-Felix tests at the end of the first and second weeks after onset. A rise in titer during the second week from 1/25 to 1/125 or 1/50 to 1/250 is characteristic. Where only one test can be performed later in the disease, a titer of 1/125 is arbitrarily adopted as diagnostic.

Differential diagnosis must be made most commonly from malaria and dengue. Aids in the differentiation of scrub typhus from malaria are: a negative blood thick-film for plasmodia, failure of response to adequate anti-malarial therapy, the presence of lymphadenopathy, eschar, rash, and a positive Weil-Felix reaction. Malaria or dengue may frequently develop during the course of scrub typhus in areas where the three diseases are hyperendemic. In dengue there is no eschar and the fever subsides after about 5 to 7 days. The saddleback temperature curve, if present, in dengue and the development of a macular rather than maculopapular rash may also serve as points of differentiation.

The prognosis in scrub typhus is dependent on several factors. The disease, when it occurs in persons over 35 or in poor physical condition, is attended by an increase in the recovery time and a higher mortality rate. Early development of high fever, increased pulse, or cardiac irregularity is of grave import. The presence of delirium or other severe mental disturbance is an unfavorable sign.

The most common post-mortem finding is a general proliferation of the reticulo-endothelial system with production of large numbers of mononuclear cells, large and small lymphocytes and macrophages. The lungs show considerable congestion and capillary damage. The heart wall is congested and shows marked cellular infiltration. Pericardial and pleural effusions are frequently found. The liver and spleen are enlarged and congested but show little damage. The kidneys are enlarged and congested with considerable tubular damage. There is little evidence of central nervous system degeneration.

There is no specific treatment. Treatment consists primarily of good nursing care. Medical officers and assistants should prepare for a long, severe and debilitating illness, and the patients' strength must be husbanded

carefully. Early and complete rest is essential and should be maintained until the patient has been without fever for at least 10 days. Considerable sedation may be required in the management of mentally disturbed patients. Adequate fluid intake (4,000 to 6,000 c.c. daily) is absolutely essential and can usually be maintained orally, despite anorexia. A gram of sodium chloride is usually required daily to replace salt lost through sweating. However, should signs of impending congestive failure supervene, the usual caution must be exercised in the administration of water and sodium salts. Convalescence must be prolonged and return to normal activity should be very gradual. Mild cases are generally ready for duty in six weeks; severe cases require from six to twelve weeks or longer before discharge to full duty. These patients, reduced in physical fitness by the effects of their illness and by their long period of bed-rest, require carefully supervised rehabilitation. (F.A.B.)

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Endemic Exudative Pharyngitis and Tonsillitis: It is commonly believed that the beta hemolytic streptococcus is the most frequent causative agent of exudative pharyngitis and tonsillitis and that a characteristic clinical picture is associated with the presence of exudate in the throat.

During the course of studies at the Regional Hospital at Fort Bragg, it was noticed that approximately 10 per cent of all patients admitted for respiratory tract disease had exudate in the pharynx or on the tonsillar tissue. A systematic clinical and laboratory study was made of 116 such cases.

Beta hemolytic streptococci could be cultured from the throats of 50 per cent of the cases studied. However, in only half of the patients in whom the beta hemolytic streptococcus was found to be present was there a rise in titer of streptococcal antibodies (antistreptolysin titer) during convalescence. Thus in only one-fourth of the total number of cases could it be established with certainty that the beta hemolytic streptococcus was the primary cause of the infection. Fifty per cent of the cases had on culture no streptococci.

In general, in the cases showing an increase in streptococcal antibodies the onset was more abrupt, and the maximal development of symptoms and physical signs was reached within 24 to 48 hours. In these cases pharyngeal and tonsillar mucosal infection was more intense and more diffuse, the degree of edema greater, and the exudate more extensive.

No clinical differences could be detected between the non-streptococcal group and the group having beta hemolytic streptococci but not developing antibodies. Except for the presence of exudate, the latter group did not appear to differ clinically from the great majority of cases of undifferentiated respiratory tract disease.

(From the Respiratory Diseases Commission Laboratory, Regional Hospital, Section 2, Fort Bragg, North Carolina; Dingle et al.) (J.A.M.A., Aug. 26, '44.)

* * * * *

Skin Diseases in the Tropics: The Office of the Chief Surgeon, Southwest Pacific Area, has reported that skin diseases are an important factor in non-effective rates in the forward areas and that about 7 per cent of hospital admissions and 4 per cent of evacuations of patients to the United States are due to such diseases. Many dispensaries are said to show as high as 75 per cent of those reporting to sick call suffering from skin diseases which, in general, are the same as those seen in temperate climates, but because of climatic conditions take on different characteristics and frequently are more severe. Yaws and tinea imbricata have not been observed.

Until recently, qualified dermatologists were not stationed in the forward area, but this situation has been improved. It has been noted that the successful treatment of skin diseases in the tropics differs from that in temperate climates. The most common mistake, the report states, has been overtreatment. The drugs most often misused have been salicylic acid, iodine, and the sulfonamides. Ointments, pastes, and occlusives have to be used with extreme care because they are likely to produce maceration. Self-treatment with the fungicidal solution (Frazier's Solution) supplied in the jungle kit has been responsible for much overtreatment.

The most common dermatoses observed are fungus diseases. Dermatomycoses of the feet and hands show a greater tendency to become eczematized in the tropics than they do in temperate climates, especially when overtreated. Vesicular dermatoses of the hands such as pompholyx, dermatophytides, and contact dermatitis are often misdiagnosed as fungus diseases and treated with fungicidal agents, resulting in eczematous conditions. Other common fungus diseases are tinea circinata, tinea cruris, and tinea versicolor. Impetigo bullosa involving the axillae and groins is extremely common in all dispensaries. Impetigo of the bearded region is rare. Ecthymatous ulcers following abrasions, scratches, insect bites, and other superficial injuries account for many hospitalizations. Tropical ulcers of the phagedenic type have not been observed in troops.

Dermatitis venenata is less commonly seen among troops in this area than in the United States. The condition occurs only rarely from sensitization to foliage but does occur from contact with saps of two of the common trees. Contact dermatitis from the local application of the sulfonamide drugs is fairly frequent.

Eczema of hands and feet, infectious eczematoid dermatitis, atopic dermatitis, and other eczematoid conditions are apparently always aggravated by the

tropical conditions, and more care should be exercised in overseas physical examination to prevent individuals with these conditions being sent to the tropics. Other chronic conditions which usually become aggravated are psoriasis, acne, and furunculosis. Miliaria or heat rash is extremely common and accounts for a large percentage of the cases seen in dispensaries. Cases of scabies, pediculosis corporis and pediculosis pubis are rarely seen. The report states that an unexpected observation has been the relatively large number of peculiar cases of lichen planus hypertrophicus. In three months 28 cases of this condition were observed by the dermatologic consultant in the forward area. These cases present a uniform clinical picture. The condition develops suddenly and progresses rapidly. The lips and buccal membrane usually show marked involvement. The process consists of raised hypertrophic patches covering large areas of the trunk and limbs and is usually very symmetrical. Biopsy examinations have revealed the characteristic histologic picture of lichen planus. The common type of lichen planus seen in temperate climates has been observed in only two cases. (Bull. Army M. Dept., Sept. '44.)

* * * * *

Quantitative Evaluation of Certain Treatments in the Healing of Third Degree Burns: Experiments have recently been carried out on rabbits at the Naval Medical Research Institute designed to determine the rate of epithelialization of experimental third degree burns treated by various methods. The following conclusions were reached:

The superiority of coagulated-plasma - sulfonamide-film over other agents as a therapeutic agent in the treatment of third degree burns has not been substantiated in this investigation.

Surgical excision of a small third degree burn in rabbits significantly shortens its healing time. The main effect of this treatment seems to be in the removal of inhibitory cell interactions rather than on the proliferation rate.

Vaseline and sulfanilamide, thrombin-fibrinogen, and plasma sheets applied to these surgical wounds seem to have approximately the same effect on regrowth as does no medication.

Free and split-thickness grafts applied within several hours after excision have not proved successful in this investigation.

The curve of healing of both control and excised burns follows with high precision the growth curve of an homogeneous cell colony. (NMRI-82.)

* * * * *

Structural Changes in Eberthella Typhosa after Irradiation with Ultraviolet Light as Viewed with the Electron Microscope: New possibilities have been opened up in the field of immunology by the development of methods for killing bacteria and inactivating viruses by exposing them to ultraviolet radiation. Vaccines are ordinarily prepared by killing or inactivating the infectious agents with heat or one of various chemicals. It has been the hope of workers in this field that if ultraviolet light were used as the lethal or inactivating agent, there might be greater preservation of antigenicity, leading to the preparation of more potent vaccines.

The knowledge that bacteria and viruses can be killed or inactivated by exposure to ultraviolet light is not new. Ultraviolet irradiation has been used to reduce the number of airborne bacteria in operating rooms, hospital wards, barracks, etc. Experimental vaccines were first prepared by this method in 1937.

To quote from Hollaender⁽¹⁾: "The lethal action of ultraviolet radiation was first reported about 65 years ago. However, it is only in the past 20 years that quantitative studies on the effects of monochromatic ultraviolet radiation have been conducted systematically. The early investigators used only the sun as their light source, and it was not until considerably later that artificial sources were used. Investigations at first were carried out with the entire radiation coming from the source; later crude filters such as Petri dish covers or window glass were used. Finally, carefully selected filters which isolated fairly narrow regions of the spectrum were employed. It was only after monochromatic radiation was used that the most effective regions of the spectrum were isolated.

"In studies on the effects of ultraviolet radiation on microorganisms usually three distinct methods are used: the agar plate method; the liquid suspension method; and the air suspension method."

One of the methods recently introduced is that of Oppenheimer and his co-workers⁽²⁾⁽³⁾. They have prepared vaccines of the following bacteria, killed by exposing thin films of suspensions of the organisms to brief ultraviolet radiation: *Escherichia coli*, *Eberthella typhosa*, *Salmonella enteritidis*, *Staphylococcus aureus*, *Streptococcus viridans* and *Diplococcus pneumoniae*. Viruses that have been inactivated by this method for vaccine preparation are rabies in brain tissue suspensions and the viruses of St. Louis encephalitis and of poliomyelitis.

Some interesting experiments⁽⁴⁾ recently completed at the Naval Medical Research Institute, Bethesda, Maryland, have shown that different effects on bacteria are produced by ultraviolet light of different wave lengths. The ultraviolet part of the spectrum of special interest for biological work comprises

wave lengths of from 2000 to about 4000 Angstrom units. It was found that the spectrum could be divided into two definite regions: (1) ultraviolet radiation between 2000 A and 3200 A, and (2) ultraviolet radiation longer than 3200 A. In the first region, as has previously been demonstrated by Hollaender and others, death of the organism takes place with very low energy values, particularly at 2280 A and 2650 A. At the shorter wave length, the energy is absorbed predominantly by proteins; at 2650 A, nucleic acids absorb in equivalent concentration the greatest amount of energy. In the second region (longer than 3200 A), the energy necessary to produce an equivalent killing rate of bacteria is of a much greater order of magnitude, the effect being achieved possibly by virtue of the energy absorbed by some extra nucleic (extra-chromatin) component. However, the exact mechanism of killing of bacteria by ultraviolet radiation is not understood.

Under a research project carried on at the Naval Medical Research Institute (X-187), *Eberthella typhosa* was irradiated by a special technic in such a way that each organism received an equivalent, uniform quantity of energy at each of the following wave lengths: 2280 A; 2650 A; 3650 A. The organisms were then studied with the electron microscope, and observations were made from which the remainder of this report is taken.

In general, it appears that the following are the most consistent changes which take place in the morphology of *E. typhosa* after irradiation (see illustration): (1) At 2280 A, bacteria appear as faint shadows containing a few "granular" protoplasmic residues. (2) At 2650 A, the protoplasm appears "granular". (3) At 3650 A, pale vacuole-like structures appear in the protoplasm, especially at the poles.

The interpretation of the morphologic findings is fraught with difficulties. Certain possible sources of error must be taken into consideration: (1) the action of the distilled water in which the organisms must be suspended in preparation for the electron microscope, and (2) the possibility of concentration of the suspending medium during the drying which takes place in this preparation. These may produce changes in structure unrelated to the irradiation effects.

With these possible sources of error in mind, it is suggested that: (a) as a result of irradiation with ultraviolet at 2280 A, the first effect is a weakening or rupturing of the protein components of the capsule; followed by a pouring out of the protoplasm to yield "ghosts" containing little protoplasm; (b) the protoplasmic "vacuolization" which appears commonly after irradiation with ultraviolet at 3650 A may be a result of, or a reflection of, the extra-nucleic action of the ultraviolet energy; (c) the interpretation of the effect of irradiation with ultraviolet at 2650 A is uncertain because little is known at present of the location of nucleic acid components in the bacterium (3). If the "chromatin" is distributed diffusely throughout the cell, the general nature of the granulations after irradiation may be accounted for.

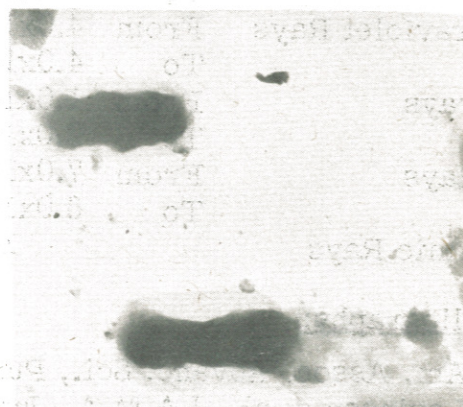
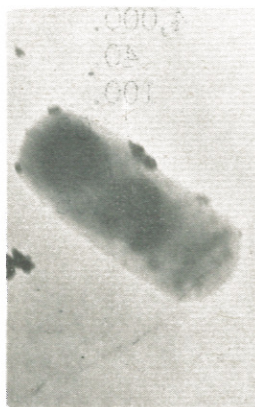


S = 9.1%

S = 600%

S = 9.1%

TYPHOID BACILLI IRRADIATED WITH
ULTRAVIOLET AT 2280 Å

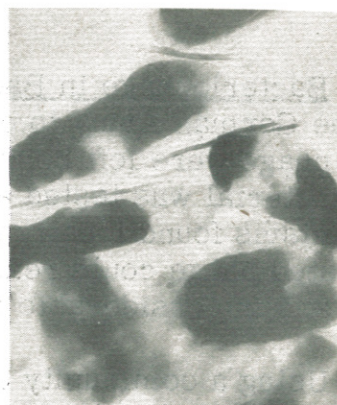
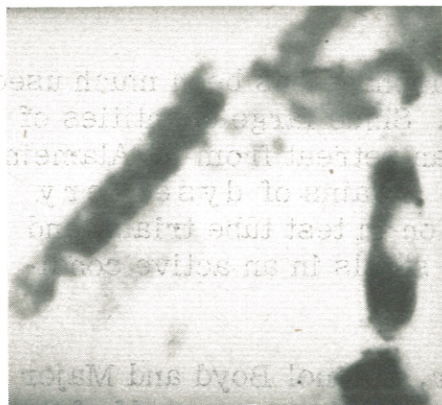


S = 10.4%

S = 10.4%

S = 0.72%

TYPHOID BACILLI IRRADIATED WITH
ULTRAVIOLET AT 2650 Å



S = 2.3%

S = 2.3%

S = 22.9%

TYPHOID BACILLI IRRADIATED WITH
ULTRAVIOLET AT 3650 Å

Sunlight coming to the surface of the earth includes infra-red radiation (longer than 7500 A), the visible range (4000 to 7500 A) and ultraviolet radiation (between 2900 and 4000 A).

Wave Length Ranges for Various Types of Radiations

<u>Type of Radiation</u>		<u>Wave Length Range Expressed in Various Units</u>			
		cm.	u	mu	A.
Hertz or Electric Waves	From	Infinity	-	-	-
	To	10^{-2}	100.	100,000.	1,000,000.
Infra-red or Heat Rays	From	3×10^{-2}	300.	300,000.	3,000,000.
	To	7.6×10^{-5}	.76	760.	7,600.
Visible Rays	From	7.6×10^{-5}	.76	760.	7,600.
	To	4.0×10^{-5}	.4	400.	4,000.
Ultraviolet Rays	From	4.0×10^{-5}	-	400.	4,000.
	To	4.0×10^{-7}	-	4.	40.
X-rays	From	1.0×10^{-6}	-	10.	100.
	To	2.0×10^{-10}	-	.002	.02
Rays	From	7.0×10^{-8}	-	.7	7.
	To	6.0×10^{-10}	-	.006	.06
Cosmic Rays		10^{-11}			

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1. Am. Assoc. Advanc. Sci., Publication #17.
2. Levinson et al., J.A.M.A., June 24, '44.
3. Milzer et al., J.A.M.A., July 8, '44.
4. N.M.R.I. Report of Research Project X-187.
5. Hollaender, J. Bact., XLVI, 1943, p. 531.

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Bacteriophage in Bacillary Dysentery: Bacteriophage has been much used in the German Army to combat bacillary dysentery. Since large quantities of this phage were left behind at the time of the German retreat from El Alamein, the material was tested and found to be still potent. Strains of dysentery organisms found locally were susceptible to its action in test tube trials, and ingested phage could readily be recovered from the stools in an active condition and in considerable quantity.

Using a community of German prisoners of war, Colonel Boyd and Major Portnoy used the phage prophylactically and therapeutically on one-half of the encampment, keeping the other half as a control. These workers report that the phage failed to show definitely favorable results when used either prophylactically or therapeutically. (Tr. Roy. Soc. Trop. Med. & Hyg., '44, 37, 243.)

Asymptomatic Neurosyphilis: The following paper was written by Drs. Paul A. O'Leary, J. E. Moore, Harry C. Solomon, John H. Stokes, and Evan Thomas, in response to a request for such an article from the Surgeon General of the Army to the Subcommittee on Venereal Diseases of the National Research Council:

Asymptomatic neurosyphilis is that manifestation of syphilis which is characterized by abnormal spinal fluid findings but in which there are neither physical signs nor subjective symptoms of invasion or involvement of the central nervous system. When a patient manifests clinical symptoms or signs which denote that the infection has involved the central nervous system, a diagnosis of asymptomatic neurosyphilis is no longer tenable, and the diagnosis is then based on the clinical manifestations of involvement of the nervous system.

Asymptomatic neurosyphilis may be encountered in any phase of syphilis. It is noted most frequently in early syphilis, in which the incidence approximates 30 per cent under older methods of treatment; however, the rate is much lower than this among patients treated by the more recently developed intensive measures. The rate among those untreated or those who have not had the newer intensive treatment for acute syphilis gradually decreases until it reaches an average of 15 per cent of patients in whom the infection is of more than four years' duration.

The significance of asymptomatic neurosyphilis lies in these facts: (1) It is the forerunner of clinical neurosyphilis; (2) it is a type of neurosyphilis that frequently responds comparatively satisfactorily to treatment and, in those cases in which treatment is satisfactory, the development of clinical neurosyphilis is thus prevented; (3) the results of repeated examinations of the spinal fluid are the only indicators of the response that the patient is making to treatment; (4) the results of repeated examinations of the spinal fluid also denote the "trend" of the disease in the central nervous system; in other words, they reveal the tendency for the fluid to change to the mild or to the severe (paretic) type; (5) the effect of various schemes of treatment gives an excellent clue to the status of the patient's mechanism of defense against the disease.

It is necessary to understand the significance of each test employed in the examination of the spinal fluid in order to interpret the results of each test intelligently in terms of therapeutic effect and prognosis. As the diagnosis of asymptomatic neurosyphilis can be made only by examination of the spinal fluid and by obtaining positive reactions, it seems appropriate to digress at this point and comment briefly on the indications for examining the spinal fluid. The spinal fluid should be withdrawn by the lumbar puncture procedure; the use of cisternal puncture is not acceptable as a routine procedure except by those especially trained for it. Among patients who are

manifesting evidence of acute or early syphilis, the spinal fluid should be examined early during the course of treatment, and, even if a negative report is obtained, the examination should be repeated six to twelve months after completion of treatment and before the patient is dismissed. Among patients who have syphilis of more than four years' duration, the spinal fluid should be examined before treatment is outlined; and also, among those patients who have clinically recognizable forms of the disease, such as cardiovascular, hepatic, osseous or late cutaneous syphilis, the spinal fluid should be tested before or as soon after treatment is started as is practicable. Of course, among patients who have signs or symptoms suggesting involvement of the nervous system, the spinal fluid must be examined before treatment is started. Among patients who have asymptomatic neurosyphilis, the earlier in the course of treatment the spinal fluid is examined, the easier it will be to interpret the subsequent changes in the various tests, thus observing the trend and response of the spinal fluid to treatment. Accordingly, among patients who have asymptomatic neurosyphilis, re-examinations of the spinal fluid must be done at intervals of approximately six months if the significance of the changes in the degree of abnormality of the spinal fluid is to be interpreted accurately.

Examination of the Spinal Fluid: An adequate examination of the spinal fluid should consist of the following five tests:

1. Cell count: This should be determined immediately after the fluid is withdrawn. If the fluid is sent to some distant laboratory, the cell count may be inaccurate in that within twelve hours there may be a 50 per cent reduction in the number of the cells. If several hours or more must elapse before making the cell count, keep the fluid in an icebox and shake well before examining. The normal spinal fluid may contain from 1 to 8 lymphocytes per cubic millimeter; however, a count of 6 to 8 lymphocytes per cubic millimeter is considered as bordering on the abnormal.

The presence of more than 8 lymphocytes per cubic millimeter is considered abnormal. The presence of large lymphocytes, plasma cells or polymorphonuclear leukocytes not only is associated with an abnormal spinal fluid but indicates a severe degree of abnormality. The presence of red blood cells in the fluid is usually due to the trauma produced by the needle.

2. Complement-fixation test. (Flocculation or precipitation test - Quantitative desirable): This test, performed by using the recommended technics, is the second important examination.

3. Colloidal gold test: The significance of this test increases with the persistence of the significant "curves" on repeated examinations. This is illustrated well in the interpretation of the zone 1, or parietic, type of curve (5 5 5 5 4 3 3 2 1 0). (Among patients who have multiple sclerosis, a zone 1

gold curve, a pleocytosis of 8 to 40 cells per cubic millimeter, an increase of the protein and globulin content and a negative flocculation or complement-fixation reaction are usually found.) One such paretic type of curve does not mean that the patient has dementia paralytica or that it necessarily will develop. However, if on repeated examinations of the fluid the gold test shows a persistence of the zone 1 reaction and the other tests of the spinal fluid also give positive results, the likelihood that dementia paralytica is impending increases with each report. The zone 2, or syphilitic, type of curve (0 0 0 2 3 3 2 0 0 0) is found among patients who have tabes dorsalis, diffuse meningo-vascular neurosyphilis and sometimes asymptomatic neurosyphilis. A normal colloidal gold curve may consist of all zeros or may show a slight increase in the middle group of figures, such as 0 0 0 1 2 2 1 0 0 0.

4. Estimation of total protein: The upper limit of normal with the usually accepted tests is 40 mg. per 100 c.c. of spinal fluid. The estimates of globulin and protein alone do not indicate the type or degree of involvement of the central nervous system but merely denote an abnormality of the spinal fluid. However, a persistently elevated total protein in the absence of other organic disease of the central nervous system may denote early involvement of the nervous system.

5. Estimation of globulin: A normal amount is interpreted as negative (Nonne-Apelt or Pandy). In cases of asymptomatic neurosyphilis the spinal fluid findings may be of varying degrees, and these five tests, in various combinations, create a pattern that may be interpreted as indicating a mild, moderate or severe degree of invasion of the central nervous system. The three grades of abnormalities of the spinal fluid are illustrated in the following table:

General Classification of Spinal Fluids According to the Degree of Abnormality Observed on Examination by Each of the Five Indicated Tests					
Group	Cells per Cubic Millimeter	Colloidal Gold Curve	CSF Serologic Reaction	Globulin	Protein mg. per 100 c.c.
Group I or mild*	8 to 30	0000000000 to 0003330000	Negative or Doubtful	Negative or Positive	25-50
Group II or moderate**	20 to 100	0003330000 to 0245542000	Positive or Strongly Positive	Positive	40-100
Group III or severe*** (paretic)	10 to 100	5555543210	Strongly Positive	Positive	75-150

* The mild group includes fluids in which the number of cells and content of globulin and protein may be increased; the complement-fixation reaction is negative, and the colloidal gold curve may be indeterminate or positive. If positive, the curve is usually of the syphilitic zone type.

** The moderate group includes fluids in which the cells number 20 or more per cubic millimeter, the complement-fixation reaction is positive or strongly positive, and the colloidal curve is of the tabetic or indeterminate type. The estimate of the globulin is positive, and the estimate of protein shows an increase to an average of 60 mg. per 100 c.c. Fluids falling just short of the requirements of the severe group are also included in this group.

*** The severe group includes those fluids that have the so-called paretic formula, that is, marked excess of globulin, content of protein averaging about 100 mg. per 100 c.c., a strongly positive complement-fixation reaction (0.2 c.c. or less), and the type of colloidal curve indicating dementia paralytica. The number of cells is decidedly increased, and in addition to the small lymphocytes, large lymphocytes and polymorphonuclear leukocytes may be present.

Significance of Spinal Fluid Findings in Prognosis and Treatment: Comment has already been made that asymptomatic neurosyphilis is characterized by a positive spinal fluid and an absence of clinical signs of involvement of the central nervous system. In spite of the absence of clinical manifestations, it is possible to recognize from the spinal fluid findings that some form of neurosyphilis is impending. It is not possible to make such deductions, however, from one but rather from successive examinations of the spinal fluid. For example, in a case of asymptomatic neurosyphilis, the paretic type of formula may be reported in the spinal fluid at the time of the first examination. If, after six months of treatment, the paretic features of the fluid persist, this finding then assumes significant proportions and, if this paretic formula remains, it is convincing evidence that the patient has a resistant type of infection, that the treatment given him has been inadequate and that a change of therapeutic program is warranted. Another type of spinal fluid report is noted among the patients who have asymptomatic neurosyphilis, who likewise manifest a paretic trend in the original test of the spinal fluid but who, after six months of treatment, no longer have the paretic features in the spinal fluid and in whom negative results may be obtained on examination after the second period of six months of treatment.

Studies of spinal fluid similar to these two examples, which denote the trend of changes in the spinal fluid while the patient is under treatment, demonstrate the outstanding value of such tests. If the trend of change in the fluid is from the paretic or group III toward the less severe types of involvement, the inference is that the program of treatment is probably adequate; but if the group III features persist, or if the fluid relapses toward the severe

type after a rest from treatment, it denotes that a change of the therapeutic program should be considered. It is recommended that for patients who have the severe and persistent type of abnormalities of the spinal fluid neuropsychiatric examinations be done at least every three months.

The results from treatment are best in those cases of asymptomatic neurosyphilis in which the abnormalities of the spinal fluid are the least severe and in those in which the patient has had the disease for only a short time. The results from chemotherapy are best in the cases of early asymptomatic neurosyphilis in which syphilis has been present for two years or less, while in those in which the disease has been present longer, chemotherapy is frequently not capable of reversing the spinal fluid findings to normal and in such cases the early use of fever therapy is indicated. When the group III formula is encountered in examination of the spinal fluid, it is usually necessary to adopt more strenuous therapeutic programs, such as fever therapy, immediately, and frequently to employ chemotherapy after fever therapy in order to reverse the reactions to negative.

In some cases of asymptomatic neurosyphilis, serologic negativity occurs spontaneously, and, although the incidence of these cases is not known, they are encountered often enough to emphasize the fact that the forces of immunity among certain patients are mustered early in the course of the disease without the aid of treatment and overcome the invasion of the nervous system completely. The development of an immune response plus modern treatment prevents clinical neurosyphilis in a high proportion of cases.

The treatment of asymptomatic neurosyphilis varies, depending on the duration of syphilis, the type of the spinal fluid pattern and the amount and type of treatment the patient has received previously. The best therapeutic results are observed in those who have had syphilis two years and who have the mild or moderate type (group I or II) of spinal fluid pattern, while the less favorable results, as evidenced by clinical progression of the disease or persistence of the positive reactions of the spinal fluid or both, are noted in patients who have had syphilis for four years or more, who have the severe type (grade III) of spinal fluid and who as a rule have had less than the minimal required amount of treatment during the early phase of the infection. Whatever treatment system is employed, its results should be checked by re-examination of the spinal fluid at intervals not greater than six months.

Observations for twenty years of a group of patients with asymptomatic neurosyphilis and study of their clinical progressions toward tabes dorsalis, general paresis and other types of clinical neurosyphilis indicate that the patients who had mildly positive spinal fluids showed the lowest incidence of clinical progression; those who had the so-called paretic formula in the spinal fluid gave evidence of clinical progression more than four times as frequently. In the study of the influence of the amount of treatment, it was found that those

who received small amounts, that is, less than ten injections of an arsphenamine, showed an incidence of clinical progression three times greater than those who received more than twenty injections of an arsenical preparation and a heavy metal.

The serologic reaction of the blood is not an indication of the status of the spinal fluid. In some cases of asymptomatic neurosyphilis the serologic reactions of the blood may be negative while the spinal fluids are strongly positive. This finding stresses the need for examining the spinal fluid irrespective of the status of the serologic condition of the blood of patients who have a history of syphilis. Patients under treatment for syphilis should not discontinue treatment, even if their serologic reactions of the blood are negative, unless the spinal fluid has been examined and found also to be negative. Among patients under treatment for early syphilis, a relapse of the blood reactions from negative to positive is accompanied by positive findings in the spinal fluid in many of the cases. Another significant maxim regarding asymptomatic neurosyphilis is that if a positive spinal fluid has not developed by the fourth year of the disease, the patient can be assured that neurosyphilis will probably not develop in the years to come.

A frequent explanation for "Wassermann-fastness" (seroresistance) may be found in the examination of the spinal fluids of such patients. Many patients thought by routine methods to be seroresistant have positive spinal fluids. In other words, these persistently positive serologic reactions in the blood are often due to the presence of asymptomatic neurosyphilis.

Even if the modern treatment of syphilis does not produce a "cure" in all cases, it does decrease materially the incidence of the late complications of the disease. The competent use of modern treatment in early syphilis has reduced the incidence of asymptomatic neurosyphilis to less than 2 per cent, as compared with an incidence of 30 per cent following the use of irregular and haphazard systems of treatment.

* * * * *

Functional Relationship of Medical Officers and Flight Surgeons Assigned to Staffs and Commands: Medical officers are currently being assigned to the staffs of fleet, force, and group commanders under official instructions to assume the functions performed in aviation activities by the flight surgeons. The directive which provides for these assignments, issued by COMINCH and CNO (121830 modified by 252135), further directs that similar action be taken in ships and other units to which medical officers are attached. Since many implications of such an assignment are not generally recognized, it is desirable to promulgate specific comments on the unique mission and functional relationship which have become a part of the flight surgeon's duty.

Flight surgeons not only perform the regular duties prescribed for medical officers in general but also assume a special role in the field of preventive

medicine as it relates to aviation personnel. This role is essentially one of maintaining the efficiency of expensively trained personnel who operate costly equipment under conditions of peculiar emotional and physical stress. The effective fulfillment of this role entails consideration of the following:

(a) Close appraisal of the individual's normal personality characteristics. This is essential to the early recognition of deviations from the individual's normal status.

(b) Accurate appraisal of the stress factors to which the individual is subjected. This entails the fullest possible participation in the work of the group concerned and constitutes one reason why flight surgeons are encouraged to fly as much as possible.

(c) The establishment of the fullest possible rapport with all personnel for whose health and efficiency the medical officer is responsible. This entails the closest possible living and working relationships. Flight surgeons are trained to spare no efforts to win the confidence and friendship of the flying personnel with whom they are associated.

(d) Counsel and advice to individuals concerning their personal problems, and physical condition and efficiency.

(e) Appropriate recommendations to commanding officers that rest, leave, or other corrective measures be provided for individuals or groups showing signs of fatigue before efficiency has been seriously impaired. This entails an understanding of current activities and the prospective operations of the unit.

The demands of modern warfare place heavy responsibilities upon all officer personnel. These stresses are often severe for officers in command and others serving in especially responsible staff assignments. It is generally recognized that for every individual there is a point beyond which he cannot be subjected to stress without deterioration of efficiency. It is also true that the individual is usually unable to recognize the effects upon himself of excessive fatigue. The utmost in understanding, judgment and tact is called for in the performance of the duties included in these assignments of medical officers who fulfill the important functions contemplated in the basic directive.

It should be borne in mind that through many years of participation in a common effort in the development of aviation, a background of mutual respect and confidence has been evolved which makes for the natural and ready acceptance of the flight surgeon's position and work. These advantages may not be immediately available to medical officers directed to assume these relationships in command organizations of other than aviation activities. This situation may call for the exercise of patience in developing the proper relationship between the medical officer and members of the command organization. (J.C.A.)

A Method of Evaluating Neuropsychiatric Casualties: The following item, contributed by Commander Robert S. Schwab (MC), USNR, presents an interesting graphic method of rapidly classifying psychiatric casualties in the forward area. It is presented here in the hope that it will be of value to certain medical officers who may wish to use it to simplify their own work. It does not represent a standard procedure recommended by the Bureau.

Two main groups of neuropsychiatric casualties are seen in combat areas. The first group consists of men with past histories that are free of long-standing neurotic traits and chronic illness of any sort and who have made reasonably satisfactory adjustments in civil life to school, home, sex and jobs. In the main these men can be salvaged therapeutically for return to duty.

The second group is made up almost entirely of those who give histories of pre-enlistment neurotic traits and illness, have been incapacitated for long periods, and, on the whole, have made poor and unsatisfactory adjustments to home, school, sex and work. These cannot be returned to a duty status in the immediate future in spite of intense or prolonged psychotherapy and rest. They are the neurotic personalities that require evacuation to the United States for medical survey.

Since psychotherapeutic facilities are definitely limited in the forward war areas, prompt and efficient separation of neuropsychiatric casualties into these two groups is essential. Furthermore, allowing the hopeless patients of the second group to mingle with those of the favorable or first group acts in a most dangerous and insidious manner to intensify and prolong the neurotic symptoms of the more favorable personalities by a sort of psychic contagion of unhealthy ideas and patterns.

Since neuropsychiatrists, experienced and well trained in such selection, are limited and usually not available in field hospitals, evacuation vessels, or other forward areas, the general medical officer has the first contact with these patients as well as their care for two to four weeks until they reach hospitals in the rear which have neuropsychiatric services. By that time the therapeutic opportunities have been lost, the evil of psychiatric contagion has done its work, and the golden opportunity of salvaging the first group has passed. By then, neurotic symptoms, even in the stable individuals, have been allowed to crystallize into serious chronic disability. As a result a high percentage, about 75 to 80 per cent, of the neuropsychiatric casualties may require evacuation to the United States.

On the other hand, if prompt and efficient evaluation of the neuropsychiatric casualty can be made in the forward area by the general medical officer, and immediate simple therapy instituted in the first group, including segregation from the second group, about 70 per cent will be ready for duty or further rehabilitation when they reach the rear area.

It is therefore desirable to have a simple, short and reliable method available to the medical officer who first sees these cases.

There are four factors that determine a man's ability to recover completely from a severe emotional situation:

A. The degree or amount, including duration, of the stress or strain encountered.

B. The amount or degree of the resulting incapacity or breakdown (i.e., symptoms) caused by the stress.

C. The amount of resiliency, or response of the personality toward recovery when the stress (A) has been removed.

D. The degree or amount of previous instability or vulnerability in dealing with stresses and strains previously encountered in civil life or in an earlier military period.

These four factors make up the bulk of the usual long neuropsychiatric investigation and determine whether the patient will get well or remain ill.

It is possible, however, to quantitate the factors roughly and quickly during the first day or so of the man's illness without the need of a long detailed neuropsychiatric workup and to make prognoses that are accurate in 90 per cent of the cases seen.

This can be done by any well-trained general medical officer by means of the evaluation sheet now to be described. It has been thoroughly tested in over 500 neuropsychiatric cases.

The evaluation sheet is made on an ordinary health record sheet (Form H8) which has been divided into four areas, each of which is an extension of one side a 1-inch square in the center of the sheet. The square is subdivided into nine squares by dividing the diagonal into three equal parts and drawing vertical and horizontal lines through each of the two points (see Figure One).

The dimensions of the four areas - and their lettering is indicated in Figure One. Note that the left lower half of the square is shaded.

Instructions for Using Chart

General: The interview can be as short as five minutes, but usually ten to fifteen minutes is more satisfactory and thirty minutes ideal. A corpsman or pharmacist mate can aid in getting some of the required data such as name, rank, age, marital status, months in service, months overseas, and type, duration and intensity of the stress encountered in combat. In addition he can obtain relevant information about family history - school, and occupation, but in no circumstances should he try to evaluate any part of it.

MEDICAL HISTORY

(Surname)	
(Christian name(s))	
Born: Place	Date
STATE NAME OF PLACE	DATE EACH NEW ENTRY
Past History	Stress A
(instability)	Length Service.....
D	Length Overseas.....
Combat:	
min mod sev Symptoms	
min	min B
mod	mod
sev	sev
min mod sev	
Recovery	
C	

16-5917

FIGURE 1 EVALUATION SHEET
READY FOR USE

MEDICAL HISTORY

(Surname)	
(Christian name(s))	
Born: Place	Date
STATE NAME OF PLACE	DATE EACH NEW ENTRY
Doe	21 yrs S.
John	
Penn.	7/29/44
Past History	Stress A
(instability)	Length Service: 20 mos.
D	Length Overseas: 10 mos.
Grad: High Sc	
Parents l & w	Combat: Bougainville
3 sibling	50 days. No trouble.
l & w	
worked	
machine shop	Guam 7 days - heavy mortar
always well	fire. 2 chums killed.
Has girl	Little sleep - Food
Sex O.K.	hard to get. Exhausted
No neurotic	Heavy work.
traits	
min mod sev Symptoms	
min	min B
mod	mod Tense
sev	sev Anxious
min mod sev	
Recovery	
C	
Much im-	
proved with	
rest and	
sedatives	
next day.	

16-5917

FIGURE 2 EXAMPLE GROUP
FAVORABLE CASE EVALUATION

MEDICAL HISTORY

(Surname)	
(Christian name(s))	
Born: Place	Date
STATE NAME OF PLACE	DATE EACH NEW ENTRY
Daugh	19 yrs S.
William	
N. Carol.	7/30/44
Past History	Stress A
(instability)	Length Service.....
D	Length Overseas.....
9th grade	
Parents divorced when	Combat: Saipan on evening
pt. 5 years	first day became trembly -
old.	unable to move. Cried -
Brought up	tense. Turned self in to
by mother	corpsman. Moderate shell
who has	fire. Saw dead of enemy
rheumatism.	on beach.
Only child.	
Close to	
mother.	
Many odd	min mod sev Symptoms
jobs.	min B
min mod sev	
Recovery	
C	
Hardly any	
better	
after 2	
days of	
sedation.	
Legs ache	
Can't eat	
military	
food.	
Fearful of	
duty.	
Tremor	

16-5917

FIGURE 3 EXAMPLE GROUP II
UNFAVORABLE CASE EVALUATION

This data can, under pressure of many admissions, be scribbled down in an abbreviated way in pencil and more detailed or neat copies made later.

Estimation of Stress - A: Obtain a brief account of the battle stress noting duration and intensity of enemy fire, closeness of large explosions, death of friends, horrible or unusual sights, and deprivation of sleep, food, rest and water.

It is not difficult to decide whether the stress is minimal, moderate or severe, and it is surprising how closely different doctors agree. For example, a man with no actual exposure to enemy fire, overseas a year, with severe operational stress of alerts, etc., and death or illness at home would be called moderate stress. A man out six months on a base behind the lines - minimum stress. A man in the front lines under heavy mortar fire for a week - severe stress. When the stress is estimated, an X is made in the top of the appropriate small square on the stress line (as indicated in the samples illustrated) noting that extreme left is minimal, middle is moderate and right severe.

Estimation of Breakdown - B: Mild tension and anxiety or somatic complaints not interfering with ability to carry on would be minimal. Naturally few such problems would be encountered. Inability to perform duty, with panic, marked tremor, tension, anxiety, would be moderate or extreme according to the degree. Amnesia or excited confusions would of course be severe.

Again in this estimation the use of common sense and understanding of the problem makes it easy to evaluate symptoms into these three divisions. The X is marked on the right hand side of the square, top - minimal, center - moderate, and low - severe.

Estimation of Recovery - C: Improvement with rest and sedation, desire for duty, insight, helpful attitude, ability to eat and sleep when the stress has been removed can be estimated fairly well. Marked recovery (severe is of course a poor word in this category) will rarely be seen early, and most estimations here will be between minimal and moderate.

The X goes on bottom of the square, the left being minimal, center - moderate, and right - marked.

Estimation of Past History or Degree of Instability - D: This is perhaps the most difficult part to quantitate accurately. Brief questions as to family background, strife at home, divorce of parents, overdependence and closeness to one or both parents, as with an only child, chronic illness of a sibling or parent, family alcoholism or brutality - indicate unstable and unhealthy background. Inability to get along in school, at play or at work with irregular employment or police records indicate instability of personality. The presence of chronic

illness such as delicate stomach, frequent incapacitating headaches, much absence from school or work, bed-wetting and sleepwalking after the age of ten, anxiety in recitations or with strangers - all indicate unstable and vulnerable characters. Shyness, timidity, inability to adjust to sex and marriage - all are signs of instability.

Again common sense and a general knowledge of people and society help place the past history in one of the three divisions. Attention should be paid, too, to the military record before this examination. The X goes on the left side of the square, top - minimal, center - moderate, and bottom - severe.

Final Scoring: When the four X's are properly placed on the sides of the respective small squares, the chart is completed as follows:

Points A and B (stress and breakdown) are plotted together so that their projections form point AB.

Points C and D (recovery and instability) are likewise plotted together forming point CD.

Points AB and CD are then joined by a heavy line AB - CD.

If this heavy line falls mainly in the clear upper right half of the square, the patient is in Group I with a favorable prognosis for return to duty.

On the other hand, if it falls mainly in the shaded lower left half of the square, the patient is in Group II and has a poor prognosis for return to duty and probably will require evacuation to the United States and ultimate survey.

If the line is very close to the diagonal or equally across it, it represents a borderline situation which will require re-evaluation after further treatment and observation.

Favorable cases (Group I) should be mixed with surgical and medical casualties with good prognoses, given early treatment of rest and sedation, reassurance and explanation, and prepared for return to a duty status in a relatively short time after rehabilitation and convalescence.

Definitely unfavorable subjects (Group II) should be segregated, kept comfortable, and allowed to accept transfer to the United States. Therapy should be concentrated on the favorable (Group I) cases, with the idea of returning most of them to duty.

Value of Chart to Subsequent Medical Activity: The correct classification of psychoneurotic patients into the two groups - favorable and unfavorable, with a brief summary of the important data bearing on this, is of tremendous value

to the admitting officer of the large base hospitals receiving these patients and greatly facilitates his prompt allocation of them to duty or to evacuation wards.

Errors: Mistakes will be made. They can usually be promptly corrected, and by and large will do no harm. Since four factors are considered in each case, errors in any one will not affect the final score. The marked increase in successful therapeutic results will more than offset the small percentage of errors so made. Actually 80 per cent correct disposals will be made if the procedure is carried out with care and thought even by medical officers with little if any psychiatric training.

* * * * *

VD Contact Report (Form NavMed 171): Since 1 July the new uniform system of reporting contacts of venereal disease patients has been in operation and in general appears to be functioning smoothly. Review of Form NavMed 171 copies reaching BuMed indicates, however, that a few misconceptions and misinterpretations of the basic instructions printed on the reverse of Form NavMed 171 and supplementary instructions dated 14 May 1944, issued with Bumed News Letter, Volume 3, Number 12 of 9 June 1944, have crept into the field handling of reports.

Owing to security regulations, ships and stations having Fleet Post Office addresses are cautioned to follow exactly instructions relative to reporting ship or station printed on Copy C of Form 171. With respect to routing, basic Instruction 4 printed on the reverse of the Form should be closely adhered to when Instruction 4 applies. The geographic place of exposure should always be given and not a Navy number. Regardless of where the exposure took place, all activities located within Naval District boundaries must provide their DMO with Copy C of Form 171, as outlined by basic Instruction 3 printed on the reverse of the form.

Each report completed, without respect to the adequacy of information obtained, is to be run through the system in accordance with instructions on the reverse of the form. Even incomplete and apparently insignificant data frequently provide missing items for health department field workers which enable them to locate a contact for whom data has previously been reported from other sources. Likewise, reports with data insufficient for identification of the contact serve to bring to the attention of civilian health authorities the fact that infections to Naval personnel are arising in their community and that more aggressive venereal disease control activity might be indicated.

It is suggested that data reported as to prophylaxis include notation, when appropriate, of the time interval between exposure and prophylaxis, with any

additional pertinent information. Forms should be filled in by typewriter wherever possible. Copy C should be held by District Medical Officers for the full eight week period with exceptions as noted in Section VI of the "Outline of Venereal Disease Contact Reporting System Utilizing Form NavMed 171" dated 14 May 1944. Medical Department personnel should always bear in mind the fact that contact reports are considered and handled as private and professional information. The identity of patients naming a contact should not be revealed to the contact or to any other person.

Routing of VD Contact Reports in the U. S. and Possessions: Forwarded with this issue of the Bumed News Letter is NavMed 418, a "Routing Chart for Form NavMed 171." This tabular summary presents pertinent data as to the routing of forms originating or naming as place of exposure any locations within the United States and its possessions.

Routing of Foreign VD Contact Reports: Basic Instructions 3 and 4 printed on the reverse of Form NavMed 171 control the handling of reports naming places of exposure outside of the United States and its possessions. In essence, these instructions direct that such reports originating in a District be sent to that DMO and that such reports originating in activities not within Naval District boundaries be sent to BuMed.

These instructions apply to all reports for Central and South America, the Caribbean (with the exception of exposures in U. S. possessions, which are handled as if the exposure took place in a State), and for all overseas non-American areas. Canada is an exception to these general rules.

Reports originating in the U. S. and possessions and naming Canadian places of exposure should be forwarded to the DMO in the normal manner. The DMO will then forward copies A, B, and D to the Provincial Health authorities listed below. The Canadian authorities will follow up the report and return copy B, properly completed, to the DMO. Overseas stations and ships will continue to forward all foreign reports, including Canadian, to BuMed.

Canadian Provincial health authorities are: Provincial Health Officer, Victoria, British Columbia; Deputy Minister of Health, Edmonton, Alberta; Deputy Minister of Health, Regina, Saskatchewan; Deputy Minister, Department of Health and Public Welfare, Winnipeg, Manitoba; Deputy Minister of Health, Toronto, Ontario; Deputy Minister of Health, Quebec, Province of Quebec; Provincial Health Officer, Fredericton, New Brunswick; Chief Health Officer, Halifax, Nova Scotia; Deputy Minister of Health, Charlottetown, Prince Edward Island. (W.H.S.)

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Public Health Foreign Reports:

<u>Disease.</u>	<u>Place</u>	<u>Date</u>	<u>Number of Cases</u>
Plague	Egypt	Jul. 22-Aug. 12, '44	11 (5 fatal)
	Fr. West Africa,	Apr. 20-Jul. 26, '44	115 (99 fatal)
	Dakar	Aug. 1-7, '44	38 (27 fatal)
	Indochina	Jul. 1-20, '44	2
	Peru, Ancash Dept.	June '44	10 (1 fatal)
	Senegal	Jul. 1-20, '44	21 (6 fatal)
Smallpox	Brazil	Jul. 24-Aug. 12, '44	150
	Br. East Africa	Jul. 7-22, '44	621 (1 fatal)
	French Guinea	Jul. 1-10, '44	44 (5 fatal)
	Iran	Apr. 1-May 12, '44	218
	Nigeria	Jul. 15-22, '44	113 (15 fatal)
	Peru	June '44	25
	Union of So. Africa	Apr. 1-30, '44	112 (1 fatal)
	Venezuela	Jul.-Aug. '44	55 (2 fatal)
Typhus Fever	Chile	Jun. 15-Jul. 15, '44	90 (12 fatal)
	Colombia	January-July '44	257 (10 fatal)
	Ecuador	June '44	38 (4 fatal)
	Egypt	Jul. 15-22, '44	172 (34 fatal)
	Guatemala	July '44	175 (17 fatal)
	Hungary	Jul. 15-29, '44	117
	Indochina	Jul. 1-20, '44	29
	Morocco (Fr.)	June '44	402
	Peru	June '44	170
	Rumania	Apr. 24-May 7, '44	822
	Trans-Jordan	Jun. 24-Jul. 1, '44	5
	Union of So. Africa	April '44	854 (185 fatal)
	Venezuela	July '44	11
	Yugoslavia	Jul. 1-14, '44	348
Yellow Fever	Belgian Congo	Jun. 26, '44	1 (fatal)
		Aug. 12-17, '44	10
	Gold Coast	Aug. 4 & Jul. 20, '44	2 (suspected)
	Portuguese Guinea	Jul. 25, '44	1

(Pub. Health Reps., Sept. 1 & 8, '44.)

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To: All Ships and Stations.

BUMED-W-EB
L8-2/JJ57(042-43)
15 Sep 1944

Subj: Penicillin Therapy of Early and Latent Syphilis.

1. Sufficient information has been accumulated to warrant recommendation that penicillin therapy of early and latent syphilis may now be adopted as a routine procedure. Early syphilis is defined as those cases diagnosed in the primary or secondary stage. Latent syphilis includes those infections of unknown or of more than two years' duration, without symptoms or physical signs of syphilis and where the diagnosis rests on a confirmed positive blood serologic test for syphilis.

2. Decision as to use of this method of treatment rests with the medical officer and necessarily will be influenced by the desirability of quickly returning the patient to active unrestricted duty, the present treatment status of the patient and the necessity for proper selection of cases. If penicillin therapy is instituted, no variation in the dosage, route of administration, or treatment schedule as detailed below is authorized.

3. The recommended treatment plan for both early and latent syphilis is 40,000 Oxford units of penicillin administered by the intramuscular route every three hours day and night making a total dosage of 2,400,000 units of penicillin given in 60 injections in 7-1/2 days.

4. If mapharsen-bismuth therapy has already been instituted, this may be discontinued and penicillin therapy instituted. In no case, however, shall mapharsen or bismuth and penicillin be given concomitantly.

5. It is directed that each medical officer forward to BuMed the following information in letter form for every case of syphilis treated with penicillin:

a. To be forwarded at completion of therapy:

- (1) Name in full, age, rate and service number of patient.
- (2) Diagnosis - type of syphilis.
- (3) Duration of disease - days.
- (4) Patient's weight.
- (5) Date of starting treatment.
- (6) Previous treatment, if any.
- (7) Manufacturer, type and lot number of penicillin.
- (8) Results of pre-treatment Kahn test (quantitative Kahn titer in units if possible).

b. To be submitted monthly:

(1) Results of Kahn test (to be performed monthly for one year and with titer in units if possible).

(2) Results of spinal fluid examination (to be performed between the third and sixth month following completion of treatment in both early and latent syphilis, and in latent syphilis before institution of treatment).

6. Medical officers are responsible for proper entries in each Health Record to insure submission of above specified reports wherever the patient may be stationed. Patients and records shall be checked monthly for one year subsequent to completion of treatment and the reports submitted regardless of station or medical officer initiating penicillin therapy. A low relapse rate is to be expected with this treatment, but only by thorough follow-up will these relapses be detected. Re-treatment of such cases must be initiated without delay.

7. Penicillin shall be used as herein authorized only when the local supply is adequate to meet all existing or contemplated demands of a more urgent nature.

--BuMed. L. Sheldon, Jr.

* * * * *

Subj: Emergency Medical and Hospital Expenses.

9 Sep 1944

Under decision Assistant Comptroller General United States 27 June 1944, Navy Department may now defray expenses emergency medical and hospital treatment enlisted personnel Navy and Marine Corps obtained from civilian sources while on leave or liberty where it is impracticable to obtain treatment from naval or other Government facilities. Decision is retroactive to 28 April 1942. Claims for such expenses may be submitted accordance paragraphs 3162 and 3167, BuMed Manual, and should be limited strictly to emergency medical or hospital care as distinguished from elective treatment. Decision does not include officers in view article 1189(1), NavRegs.

--SecNav. Ralph A. Bard.

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To: All Ships and Stations.

BUMED-C-LET
P3-2/LL(084)

Subj: Hospitalization of Civil-Service Employees -
Female.

12 Sep 1944

1. The following changes shall be made in Circular Letter C, "Injured Civil Employees", Appendix D, Manual of the Medical Department:

Para. 6(a), second sentence, delete word "male".

Para. 6(f), delete entire paragraph.

Para. 6(g), change (g) to (f).

2. The above changes are made in consideration of the female components of the Navy, Marine Corps and Coast Guard. Female civil-service employees may now be admitted to naval hospitals under the same conditions in all respects as are injured male civil-service employees provided that suitable facilities for female patients are available. --BuMed. L. Sheldon, Jr.

To: All Ships and Stations.

Op13-1D-mms
Serial 350413

Subj: U. S. Naval Convalescent Hospital, Springfield,
Massachusetts - Establishment of.

8 Sep 1944

1. The property of the International YMCA College at Springfield, Massachusetts, which has been acquired for use as a naval convalescent hospital, is hereby established and designated:

U. S. Naval Convalescent Hospital,
Springfield, Massachusetts.

This is an activity of the First Naval District.

2. Bureaus and offices concerned take necessary action.

--SecNav. Ralph A. Bard.

* * * * *

ALNAV 172

Subj: Telephone Calls from Hospitals Outside U. S.

1 Sep 1944

For improvement in morale of naval personnel who are casualties in naval hospitals outside the United States, this personnel may be permitted to make telephone calls to persons in the United States subject to discretion commanding officer and censor at hospital wherever located. Censorship regulations re disclosure of classified information, including reference to other casualties not officially announced, remain in effect. Calls will be filed sans origine.

--SecNav. Ralph A. Bard.

* * * * *

ALNAV 173

Subj: Gasoline Rationing.

5 Sep 1944

Effective immediately, gasoline-rationing procedure covering official travel by naval personnel within the continental limits of the United States as outlined in SecNav letters PM381:CHC, dated 27 June 1944 and 8 August 1944, is hereby modified to provide that in the case of naval, Marine Corps, and Coast Guard personnel returning to the continental limits of the United States from duty afloat or overseas, the commandant of the district in which such personnel land may by endorsement add to the travel orders of such personnel authority to travel by private automobile when, in the opinion of the commandant, circumstances warrant such authorization in accordance with existing instructions.

--SecNav. Ralph A. Bard.

CIRCULAR LETTER NO. 259-44

To: All Ships and Stations.

Pers-34-ECS

Subj: Navy Nurse Corps Uniforms.

JJ55-3

13 Sep 1944

1. The Secretary of the Navy has recently approved the following for members of the Navy Nurse Corps:

a. The blue and white garrison caps, now authorized for male personnel, are authorized to be worn as optional items of uniform, when prescribed by the commanding officer. When the garrison cap is worn, the insignia of rank shall be worn on the right side and the miniature cap device on the left side, each 2 inches from the front edge.

b. Beige hose shall be worn with Service Dress White.

c. Dress Shoes, Black: Dress shoes may be laced oxfords, simple pumps or monk strap style, with closed toes and heels, of plain black leather or fabric, with black stitching, heels not higher than 1 1/8 inches. Suede, patent leather, or novelty leather shoes are not permitted.

d. Dress Shoes, White: Shoes of the same description as Dress Shoes, Black, but white in color, with white stitching. Buckskin-type leathers or leathers with a smooth, slightly grained, or sueded finish are permissible. Covered or built-up leather heels are acceptable.

e. When authorized by the commanding officer, the basic seersucker dress now authorized for wear by members of the Women's Reserve may be worn by personnel of the Navy Nurse Corps while on duty in certain hospitals in the Pacific area where difficulty is experienced in the maintenance of white starched uniforms.

--BuPers. L. E. Denfeld.

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To: All Ships and Stations.

Pers-3A-EM

Subj: Annual Physical Examinations.

P2-5

BuMed-Rl-JLA

P2-5/00(063)

Ref: (a) General Order 191, of 28 May 1943.

21 Aug 1944

1. During the past year many instances have occurred which indicate that the provisions of the referenced General Order have not been carefully carried out.

2. Attention of commanding officers is particularly invited to provisions of paragraph (6) of reference (a).

a. As soon as practicable after the end of the calendar year, medical officers having custody of officers' health records shall forward to the Bureau of Medicine and Surgery the medical history sheets containing entries, accompanied by a letter of transmittal. The medical history sheets so forwarded

shall contain entries indicating the results of examinations made in accordance with reference (a) or the date and purpose of any examinations made during the previous calendar year. The full name and rank and the place and date of birth shall be entered on each medical history sheet.

b. Should conditions be discovered which temporarily or indefinitely unfit the individual for performance of his duties, and in the case of flying personnel, for aviation duties, appropriate action shall be taken locally as promptly as service conditions will permit. In order to avoid unnecessary correspondence, the report of physical examination in such cases should contain a notation showing the local action taken.

c. A report of physical examination on NavMed Form Y and NavMed Form 1 in the case of qualified naval aviators to the Bureau of Medicine and Surgery is required only when defects are discovered which are regarded as sufficient to impair the examinee's ability to perform his duties. Where no disabling condition is found, an entry in the health record showing the date and result of the examination is all that is required.

--BuMed. Ross T McIntire.

--BuPers. Randall Jacobs.

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To:	Chief, Dentistry Division, BuMed.	BUMED-E-LG A3-4/EN(073-40)
Subj:	Reorganization of Dentistry Division, BuMed.	18 Sep 1944
Ref:	BuMed ltr A3-4/EN(073-40), 8 Feb 1943, Organization and Function of the Dental Division.	

General

1. Reference is hereby cancelled and superseded by this directive, effective this date, outlining the functions and the plan of organization of the Dentistry Division of the Bureau of Medicine and Surgery.

2. The Dentistry Division shall (a) consult with the Inspector of Dental Activities in order to determine the dentistry needs and problems arising in the field; (b) study, evaluate, advise and make recommendations on the dentistry needs, policies, standards, practices and performances of dental activities in the Medical Department; (c) initiate and recommend actions pertaining to complements, appointment, promotion, advancement, training, assignment and transfer of dental personnel; and (d) maintain liaison with such other BuMed offices or divisions or such other military and civilian agencies as may be required in the prosecution of the functions of this Division.

3. In order to expedite these functions, the Dentistry Division shall consist of: (a) an Office of the Chief of Division, (b) a Dental Standards Branch, and (c) a Dental Personnel Branch.

Office of the Chief of Division

4. The Chief of the Division shall be responsible for the performance of all functions assigned to the Dentistry Division, but shall adopt no major policies, methods, or procedures without the approval of the Chief of the Bureau of Medicine and Surgery. In order to assist the Chief of the Division in the general administration of the Division, there shall be established the "Office of the Chief of Division" as part of the organization of the Dentistry Division. The office shall consist of the Chief of the Division and such other personnel as may be required to assist the Chief in the general administration of his duties.

Dental Standards Branch

5. The Dental Standards Branch shall perform the functions listed in points (a), (b) and (d) of paragraph 2 of this directive. This Branch shall consist of (a) a Dental Policy Section and (b) a Dental Liaison Section.

6. The Dental Policy Section shall consult with the Inspector of Dental Activities in order to determine the dentistry needs and problems arising in the field, and shall study, evaluate, advise and make recommendations on the dentistry needs, policies, standards, practices, and performances of dental activities in the Medical Department.

7. The Dental Liaison Section shall maintain liaison with such other BuMed offices or divisions or such other military and civilian agencies as may be required in the prosecution of the functions of this Division.

Dental Personnel Branch

8. The Dental Personnel Branch shall perform the functions listed in point (c) of paragraph 2 of this directive. This Branch shall consist of (a) a Dental Appointment Section and (b) a Dental Assignment Section.

9. The Dental Appointment Section shall be responsible for matters relating to appointment to V-12 dental program, to commissioning of dental officers, to training of dental personnel, and to disciplinary cases.

10. The Dental Assignment Section shall be responsible for matters relating to officer complements for dental facilities, to assignment and transfer of dental officers, and to promotion and advancement of dental personnel.

Organizational Changes

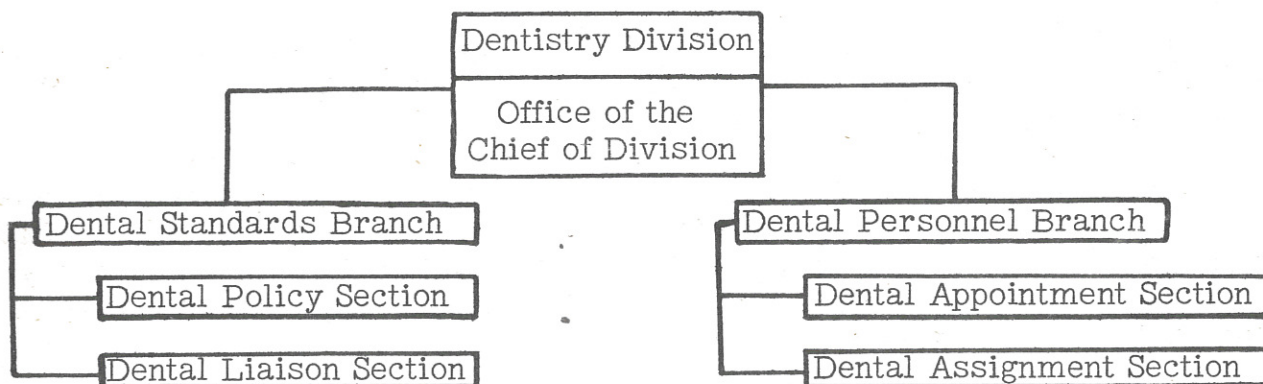
11. The functions and the plan of organization described herein require the transfer of all personnel functions relating to the Dental Corps from the Personnel Division to the Dentistry Division as well as the transfer of the

inspections functions of the former Dentistry Division to the Inspector of Dental Activities.

12. All matters relating directly to dentistry shall henceforth be referred to the Dentistry Division.

/s/ ROSS T McINTIRE
Vice Admiral (MC), USN
Chief of Bureau

* * *



Organization
Dentistry Division
Bureau of Medicine and Surgery
Navy Department

APPROVED:

/s/ ROSS T McINTIRE
Vice Admiral (MC), USN
Chief of Bureau
18 Sep 1944

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